

As the reference does not disclose that which is recited, the anticipation rejection is not viable. Reconsideration and withdrawal of the rejection are respectfully requested.

As to claim 75, this claim is amended to recite that in use, the radial sealing surface and the further radial sealing surface is being held apart at a gap. See, for example, Figures 10-12 and the associated description.

KIMURA does not disclose or suggest a gap between the radial sealing surface and the further radial sealing surface, as recited.

The dependent claims are believed patentable at least for depending from an allowable independent claim.

Claims 51-58, 60, 61, 63-72, 75 and 76 were rejected under 35 USC §103(a) as being unpatentable over KIMURA in view of IDE 4,738,453. That rejection is respectfully traversed.

As set forth above, KIMURA fails to disclose or suggest diverging gaps extending in a substantially circumferential direction relative to two rotating surfaces. IDE also fails to disclose diverging gaps extending between the surfaces on either side of a plane which contains at least one point of closest engagement, the gaps extending a substantially circumferential direction to the two rotating surfaces.

Moreover, contrary to the position set forth on page 3, Section 4 of the Official Action, pads 40 of IDE do not meet the

REMARKS

The application has been amended to place it in condition for allowance at the time of the next Official Action.

Claims 51-76 remain in the application.

Claims 51-54, 57, 58, 60, 61, 63-65, 67, 68, 70-72 and 75 were rejected under 35 USC §102(b) as being anticipated by KIMURA 5,224,714. That rejection is respectfully traversed.

Claim 51 is amended to clarify the recited gaps and recite that the gaps extend in a substantially circumferential direction relative to the two rotating surfaces. Support for the amendment may be found at least in Figures 1 and 2 with respect to surfaces 2 and 3.

The Official Action offers elements 31 and 4 of KIMURA as first and second surfaces. However, both these surfaces are flat.

In KIMURA, there is no "at least one point of closest engagement", except for grooves 33 on flat surface 32. Nevertheless, the amended claims also requires the gap extends in a substantially circumferential direction relative to the two rotating surfaces. The only diverging gap present in KIMURA is formed by surface 35. KIMURA does not disclose the gap extending in a circumferential direction. Rather, the gap of KIMURA has a completely different orientation than the recited gap, and also does not function in the same manner.

recited diverging gaps on either side of the closest point between the faces. Rather, it appears that any gap in IDE is a small chamfer on each disk head, which would make no significant contribution of the stability of the lift pads.

In addition, it does not appear that the combination of KIMURA and IDE is proper in the first instance.

KIMURA and IDE teach alternative ways of generating a small controlled gap between sealing faces in a fluid seal. Thus, both disclosures are alternative ways of achieving the same end result and combining the teachings of both documents would not produce the claimed apparatus. That is, it would not have been obvious to pick and choose selected portions of KIMURA or IDE as these disclosures are two different ways of achieving the same results.

Further, IDE never discloses that in use, the pads separate from the cooperating surface. Rather, IDE specifies that in use, the pad is rocking under the action of pressure and friction to develop a wedge lift of the nose piece. Thus, in IDE the two surfaces are not held apart at a gap due to self-generated air or gas pressure existing between the surfaces as required to meet claim 76.

By way of further explanation, a feature of the present invention is that the initial contact situation before the fluid film has been fully formed as the parting pressure is beginning. This would have to be "point contact" in IDE. In contrast, in

the recited invention, the use of frusto-conical surfaces provides initial line contact. It is more difficult to prevent a point contact from scoring the surface than when line contact is present. This is another technical advantage of the claimed arrangement that further defines over IDE.

As to claim 75 and IDE, IDE fails to disclose the pad separates from the cooperating surface of the other portion. In IDE, the generated fluid pressure between the lift pad and the cooperating tilted disc occurs all on one side of the single point of closest contact. This feature, combined with mechanical friction force when the two members are in contact, produces a tilting movement that can only be balanced by the deflecting the "dog leg" or "legs" supporting each pad.

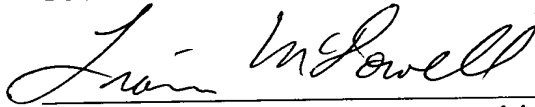
In contrast, because the surfaces in the arrangement of the present application perform a similar function and are also imbalanced, the whole of the pressure generated is converted into an axial force passing through each tile/surface pivot. Thus, the recited apparatus provides a far more efficient and robust way of creating the force needed to collect the member than the use of "legs" of IDE. KIMURA does not overcome the shortcomings of IDE as set forth above.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance, and reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

A handwritten signature in cursive script, reading "Liam McDowell", written in dark ink.

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